

WHAT IS CLAIMED IS:

1. A sheet folding and accumulation system which inverts folded sheets to assemble a booklet, the system comprising:

a folding mechanism configured to form a fold in a sheet;

5 a saddle for collecting folded sheets into a booklet for binding;

and

an inverting mechanism for inverting the folded sheet and placing the folded sheet onto the saddle with the peak of the fold in the sheet pointing upward.

10 2. The system of Claim 1, wherein the saddle is located in a fixed position with respect to the folding mechanism.

3. The system of Claim 2, wherein a portion of the folding mechanism is fixed.

15 4. The system of Claim 1, wherein the inverting mechanism is rotatable with respect to the saddle.

5. The system of Claim 1, wherein the inverting mechanism is translatable with respect to the saddle.

6. The system of Claim 5, wherein the inverting mechanism includes a belt drive.

20 7. The system of Claim 5, wherein the inverting mechanism includes a gear and rack drive.

8. The system of Claim 1, comprising a stapling assembly movable with respect to the saddle for stapling the folded sheets collected on the saddle.

9. The system of Claim 8, wherein the saddle includes a plurality of anvils configured to receive staples.

5 10. The system of Claim 1, wherein the folding mechanism forms a fold with a peak of the fold in the sheet pointing downward.

11. The system of Claim 10, wherein the folding mechanism includes a blade member positioned above a fold forming member.

10 12. The system of Claim 11, wherein the fold forming member includes a movable roller which is movable along the blade member.

13. The system of Claim 1, wherein the folding mechanism forms a fold with a peak of the fold in the sheet pointing upward and a supplemental drive device is arranged to move the folded and inverted sheet onto the saddle causing the fold to break back on itself.

15 14. The system of Claim 13, wherein the folding mechanism includes a blade member positioned below a fold forming member.

15. The system of Claim 1, wherein the inverting mechanism lifts a trailing edge of the sheet and passes the trailing edge of the sheet over a leading edge of the sheet and places the inverted sheet on the saddle.

20 16. The system of Claim 1, comprising a drive mechanism for delivering the sheets to the folding mechanism and then to the saddle.

17. A method of folding and accumulating sheets into a booklet, the method comprising:

- a) folding a sheet in preparation for assembling the sheet into a booklet;
- 5 b) inverting the sheet and placing the inverted sheet onto a saddle with a peak of a fold in the sheet pointing upward;
- c) repeating steps a) and b) with a plurality of sheets to form a stack of folded sheets on the saddle; and
- d) binding the stack of sheets on the saddle to form a
10 booklet.

18. The method of Claim 17, wherein the sheet is inverted by lifting a trailing edge of the folded sheet over a leading edge of the sheet.

19. The method of Claim 17, wherein the sheets are placed on a fixed
15 saddle.

20. The method of Claim 17, wherein the folding step forms a fold in the sheet with a peak of the fold pointing downward.

21. The method of Claim 17, wherein the folding step forms a fold in the sheet with a peak of the fold pointing upward.

22. The method of Claim 21, wherein the step of inverting the sheet
20 includes causing the fold formed in the folding step to break back on itself.